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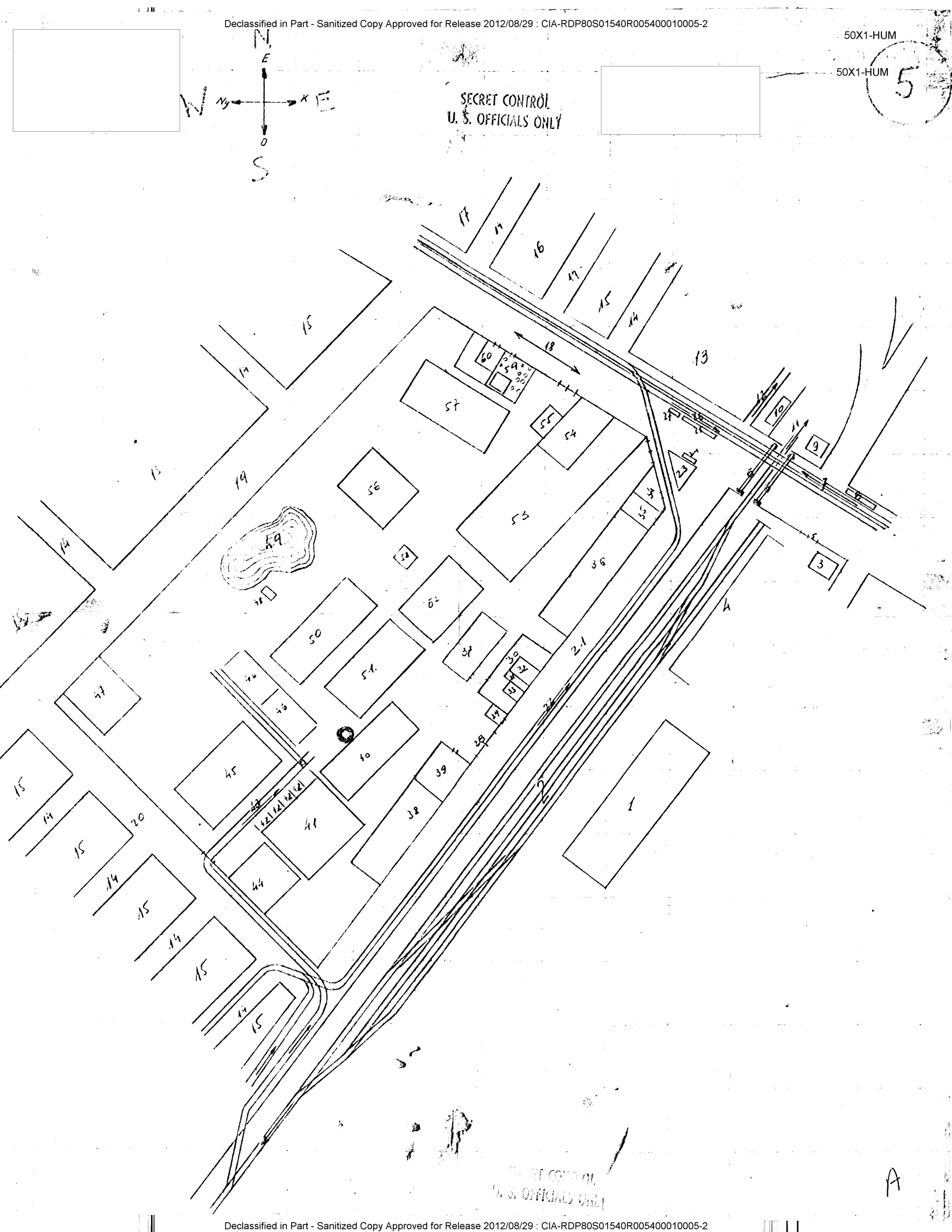

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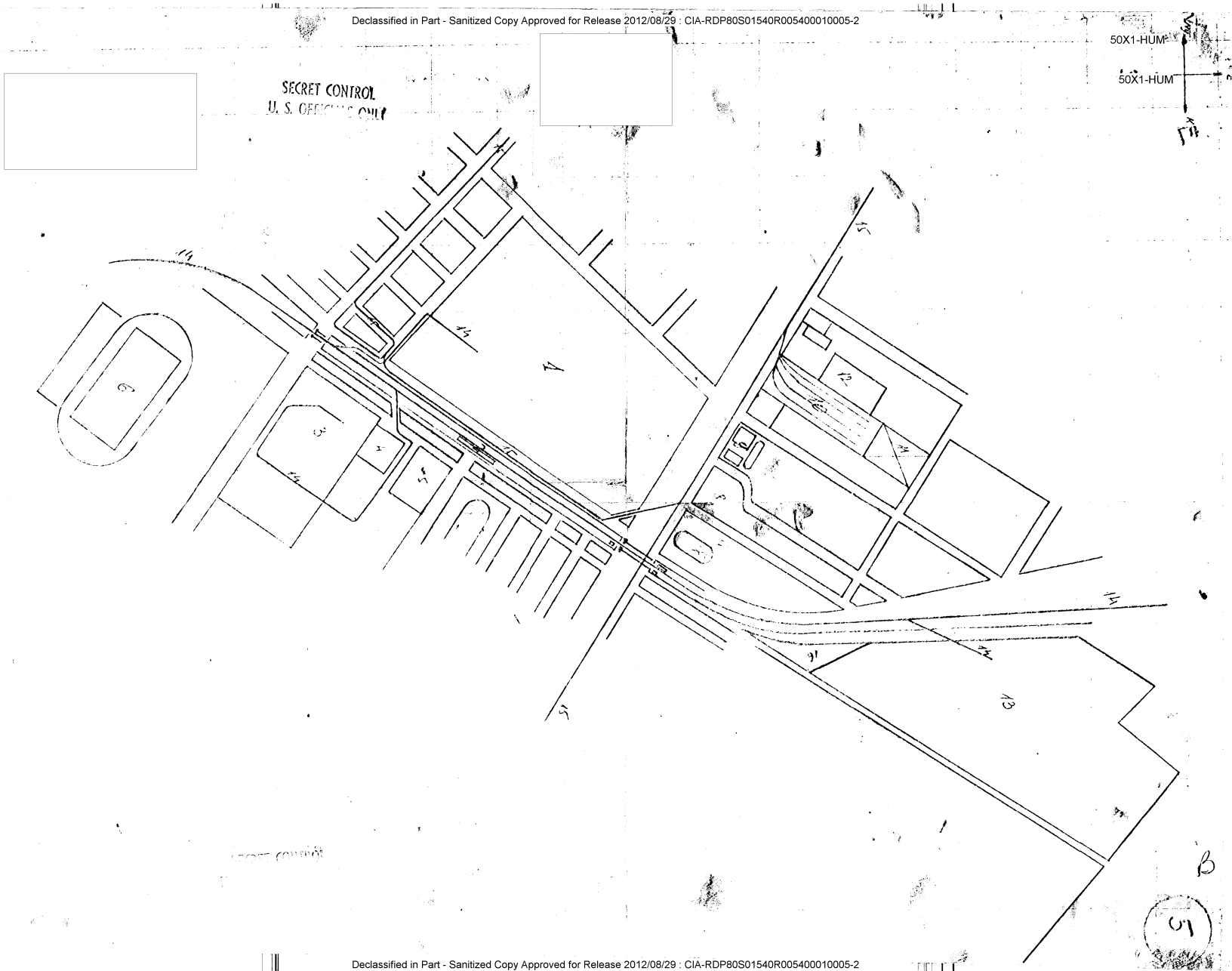

HUNGARY

Economic

VOROS CSILLAG TRAKTORGYAR
(Red Star Tractor Works) BUDAPEST

1. TITLE

VOROS CSILLAG TRAKTORGYAR (Red Star Tractor Works)

The abbreviated name, though not official, is "VOCSI". This Works was formerly called HOFHERR-SCHRANTZ TRAKTORGYAR VALLALAT (HOFHERR, SCHRANTZ, CLAYTON & SHUTTLEWORTH).

2. LOCATION

The Works are situated in Hofherr Albert Utca, the main entrance being at number 3/15. Telephone numbers: 146-120 and 146-884.

The Works have, to the south-east, the KISPEST Railway Station (commonly known as LAJOSMIZSE Railway Station). At the back of this station, to the south-east, lies the ELSO MAGYAR KARTOL-OSZALAG GYAR (First Hungarian Carding Engine Ribbon Factory). Next to it is a school, and next to the latter there is the site of the former LIPTAK GYAR and the LORINCI HENGERMU (LORINC Rolling Mill). South-west of the LORINC Rolling Mill lies the HONVED SPORTTELEP (Army Sports Ground). Behind the latter is situated the GRANIT PORCELANGYAR (Porcelain Factory).

The boundary to the south-west of the Works is the Gyar-utca. In this street, next to the factory fence, is the terminal stop of the 43 tram-line, with an extra track for shunting. The boundary of the Works to the north-west is the Vas Gereben-utca. In Gyar-utca and in Vas Gereben-utca there are, on the opposite side, a number of residential houses.

To the north-east, immediately next to the factory site, there runs the Ulloi-ut. On this thoroughfare, opposite to the factory, a little to the north, is situated a shed on the tramway. The rear section of this shed was destroyed by fire in 1950. South-east of the above shed there is a school which is at present used as a rest home of the MUNKAERO TARTALEKOK HIVATAL (Labour Reserve Office), which is also being used as a home for trainees of the Tractor Factory. Further to the south-east of this building is situated the KISPESTI TEXTILGYAR (abbr. "KISTEX") Sports Ground, and behind the sports ground lies the Kistex Gyar itself.

3. PRODUCTION

(a) Current production consists of type "K-44" single-cylinder glow-bulb-engine tractors, type "SL-50/55" six-cylinder Diesel-engined caterpillar-tracked tractors, tip lorries, ploughs, discs and harrows for tractors, spare parts, and iron and steel foundry work for other factories.

/ (b) ...

(b) Productive capacity of the Works is fully exploited; indeed it would be truer to say that machinery and equipment are over-burdened and are being operated beyond rational capacity.

(c) Current production rates are as follows (all figures are rough estimates):

Product	Units per Month	Value in Forints
Type "K-44" single-cylinder glow-bulb-engine tractors	about 100	
Type "SL-50/55" caterpiller-track tractor with six-cylinder Diesel engine	70 to 80	
Tip Lorries	¥ 100 to 120	
Ploughs, discs and harrows for tractors		
Spare parts		3.5 million
Iron and steel foundry work for other factories		
TOTAL PRODUCTION		32 - 35 million

¥ Orders have been given to increase production to 150.

(d) Production priority is given to the manufacture of tip lorries. Next in importance come the "K-44" and the "SL-50/55" tractors, in that order.

4. MATERIALS

(a) Sources of supply:

Materials	Source of Supply
Steel sections, bars, etc.	DIOSJYORI KOHASZATI UZEMEK (DIOSGYOR Smelting Works), DIOSGYOR.
Iron sections, rounds, angles, etc.	OZDI KOHASZATI UZEMEK (OZD Metallurgical Works), OZD.
Coke and pig iron	ARGI TELEP
Scrap	VASHULLADEKGYUJTO (Scrap Recovery Enterprise), BUDAPEST.
All types of ball bearings	KOZPONTI GOLYOSCSAPAGY RAKTAR (Central Ball-Bearing Depot), BUDAPEST.
Front headlights and rear lights, electrical engineering parts and accessories pertaining to the automobile industry	
All standard tools	NEMESACEL SZERSZAMERTEKESITO ES ELOSLTO VALLALAT (High Duty Steel Trading and Distributing Enterprise), BUDAPEST.
Rubber tyres and inner tubes	MAGYAR RUGGYANTAARU GYAR (Hungarian Rubber Goods Factory), BUDAPEST.
Receptacles used on tip lorry chassis for transporting soil and sand	MAGYAR DROTHALO GYAR (Hungarian Wire Netting Factory).

/ (b) ...

(b) Quality of Goods

There is a great deal of trouble caused by the inferior quality of some of the materials.

i) Steel bars are not uniform in hardness and the degrees of hardness vary within one and the same bar.

ii) Coke is of too small granulation and too soft.

iii) Moulding sand is impure and of too small granulation.

iv) Scrap from machinery is in too large pieces, impure, and the scrap iron is not graded.

v) Difficulties mentioned under ii), iii) and iv) above result in poor quality of castings in the Works' foundry.

vi) The receptacles delivered by DROTHALO GYAR are badly welded. (This cannot be remedied because the welding electrodes available are of bad quality, as are the plates).

5. DESTINATIONS OF PRODUCTS

(All figures are rough estimates except those for the SL tractor)

Product	Quantity per Month	Destination	Remarks
Type "K-44" tractors	80	For use in Hungary	Since 1950-51 exports have dropped and at present only moderate numbers are supplied to some of the Satellites (Czechoslovakia, Soviet Zone of Germany, Poland, Bulgaria and Roumania)
	20	Satellites in Europe	
Type "SL-50/55" caterpillar tractor with 6-cylinder Diesel engine	70 - 80	China	This tractor is not used in Hungary
Tip lorry	60	Hungary	
	10 - 20	Satellites in Europe	
Ploughs, discs and harrows for tractors	80%	For use in Hungary	These agricultural machines are delivered as accessory equipment for "K-44" tractors
	20%	Satellites in Europe	

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continued ...

Product	Quantity per Month	Destination	Remarks
Spare parts	50%	Hungary	
	50%	World-wide export	Spares are exported to countries all over the world, to service existing tractors which were formerly widely marketed
Iron and steel castings	80%	Used in the Works	The foundry does not work for export
	20%	Stamped parts from DIOSGYOR Metallurgical Works are forged	

The Works under discussion has no production for military destinations, excepting the supply of producer-gas to the LORINC Rolling Mills (a military works) through an overhead pipe-line of 30 cm. diam., erected in 1951.

6. TRANSPORT

(a) Incoming material arrives mainly by rail, facilities being favourable. Very urgent material coming from BUDAPEST, or from the provinces, arrives by lorry (for instance, receptacles for tip lorries come by lorry).

(b) About 90% of outgoing products are transported by rail.

(c) In an emergency, goods can be transported in wagons using the tramlines, tracks of the BUDAPEST tramway system running on three sides of the site. In addition the Works would also transport products with their own tractors and lorries, which do most of the transporting within the Works.

7. POWER

(a) i) Electric power

ii) Steam

iii) Gas

/ (b) ...

(b) Electric power is supplied from the National Grid, while steam and gas are produced in the Works. 50X1-HUM

(c) In an emergency, that is to say if all three above-named sources were interrupted, electric power could be obtained from the electric power station situated at a distance of 500 metres from the KISPEST tram shed, to which an emergency line could be erected. Supplies of gas could be obtained in cylinders containing propane-butane gas.

(d) Consumption data are not known.

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(a) The total labour strength is 3,500, but there is an additional requirement of about 300 for the manufacture of the dumpers and the SL tractors. However, it is impossible to fill these vacancies (The 50X1-HUM Ministry give special attention to the production programme for the SL tractors and authorises anything that is demanded, but this is only on paper and it is quite impossible to complete by the end of the year the 800 SL tractors destined for China).

(b) Direct/productive personnel is 77%, the remainder being indirect/non-productive.

(c) All shops work two full shifts and an additional supplementary shift, the value of which is estimated at 40% to 50% of the full shift. The same conditions in regard to relative efficiency of shifts prevail as in the CSEPEL Motor Works, except that, in the foundry shops, the position is still worse than in the CSEPEL Works because none of the regulations are adhered to since there is no control.

Rest periods, working hours per day, per week and per year are the same as in the CSEPEL Motor Works.

(d) Absenteeism amounts to about 3%, of which a large proportion is certified. The Works have the advantage of offering the workers fairly good transport conditions and consequently the personnel does not change very much and the office workers are of a good standard.

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(e) About 38% to 40% of the personnel consists of skilled workers who have been in the factory several years and who are well trained. Technical personnel amounts to approximately 10% to 12%. They have moderate qualifications, but in the last few years a number of these experts have been transferred to other factories producing agricultural machinery, for instance, the EMAG Works.

(f) About 60% of the workers live at PESTSZENTLORINC, KISPEST and BUDAPEST, from where they either walk or travel by tram or motorbus. 10% come by train or on bicycles from VECSES, ULLO and MONOR and about 30% come on foot from PESTSZENTIMRE, LAJOSMISE and other villages. 50X1-HUM

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9. MACHINERY

(a) Machinery includes:

i) Two electric arc furnaces of 3-ton capacity each.

ii) Three shaft furnaces of 800 mm. diameter.

iii) Steam hammers and stamping dies.

iv) Six steel foundry presses.

v) Centre lathes. The machines available are of the most varied types, including up-to-date models and some dating back to 1920. In 1951 a total of 100 lathes was received, of which about 50% were Czechoslovak "SKODA" lathes, whilst the remainder consisted of Hungarian "EE-1000" lathes. The total number of lathes is not known.

vi) About 10 to 12 copying lathes, which are in use for turning shafts.

vii) Vertical mills. Their number is not known, but there are not very many of these.

viii) Planing machines. There are widely differing makes and sizes. None of these machines is of the largest size and in regard to the origin of these machine tools the same applies as under (v) above.

ix) Milling machines. The situation is similar to that under (v) and (viii) above.

x) Eight to ten slotting machine of antiquated design.

xi) Cogged-wheel cutting machines, number unknown. Most of the machines are of antiquated design and there are only six to eight up-to-date specimens. The latter are in poor condition.

xii) Grinding machines. Number not known.

xiii) Cogged-wheel grinding machines. Total number not known.

xiv) Drilling machines. See (v) above.

xv) Automatic machine tools and turret lathes. Their number is not known, but it is not large.

Machine tools are of very varied types and, in the last years, the Works has received only very few new specimens, whilst prior to 1950 about 150 machine tools were mounted. The equipment is more or less worn, particularly the hammers and forging tools, which are 20 to 25 years old. The Works possess no automatic machine tools, excepting a very few in the shop producing small parts. The efficiency of the machine tools is around 60% to 65%. The machines are not sufficiently productive because, on the one hand they are technically not up-to-date and, secondly, they are worn.

(b) Vital machine tools lacking include forging hammers, dies, lathes, cogged-wheel cutters and grinding machines.

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(c) Measuring instruments available include:

i) Sliding callipers (in insufficient quantities).

ii) Zeiss optical graduators.

iii) One Zeiss optical linear measuring instrument.

iv) One profile projector.

v) Tooth controlling instrument.

vi) Optical modulus control apparatus.

vii) Optical apparatus for controlling thickness.

viii) Micrometers (in very short supply).

ix) Thread gauges. (Of these the Works are more short than of any other instrument. Several hundred such instruments were received in 1953, but even this number is insufficient in view of the large manufacturing programme for SL tractors).

x) Goniometers (including an optical instrument).

xi) Four gauge blocks.

xii) Instrument for measuring smoothness of surface.

xiii) Three optical pyrometers (there is a serious lack of these).

xiv) Balances (there are very few of these and the ones available are in poor condition).

xv) Gap gauges.

xvi) Instrument for measuring rise of threads.

xvii) Measuring wires.

xviii) Tachometers.

xix) Stop watches.

xx) Thermometers.

(d) Transport within the Works is carried out with tractors and with non-mechanised handling equipment. In the steel foundry there are cranes and rollers. In the iron foundry there is a lift and hand-wheelbarrows, whilst the transporting of molten iron is carried out by equipment running on an overhead circular rail. Raw materials (coke, crude iron, scrap, sand, etc.) are moved in railway wagons.

In general, transport methods are primitive.

/ 10. ...

10. QUANTITY AND QUALITY CONTROL

(a) The Quantity Control system is very similar to that obtaining at the CSEPEL Motor Works, the only difference being that the Tractor Works are not as well organised. Control of production in tool shops is quite illusory because, at the beginning of each manufacture period, they are mostly not in operation, whilst in the second half of the manufacture period they are operated day and night. It has been impossible to establish the performance of machine tools because of this uneven rhythm of production.

(b) In regard to Quality Control, the same applies as to the CSEPEL Motor Works. There are unfilled vacancies for 80 Quality Controllers. Their total strength at present is 240, but this number is quite insufficient. 50% of the Quality Controllers are inexpert; they are ordinary workers inadequately trained for the job, and the majority are women.

11. SERVICES

(a) Services are under control of the Chief Mechanic.

(b) Services consist of production of producer gas, central heating and electric power. Water is supplied from the urban water system.

(c) There are, in general, no complaints regarding the satisfactory working of these services.

12. BOTTLENECKS

(a) A serious bottleneck is constituted by the fact that there are 300 workers too few, mostly foundry men and men on the machine tools.

(b) There is always a lack of steel in bars, and steel for forging.

(c) In view of the poor condition of forging equipment, this work is lacking in precision and therefore much additional work on finishing faulty material is necessitated.

(d) The quality of ball bearings is very poor. This has caused much trouble with the bearings of front axles of tractors and there have been many complaints regarding tractors which have been exported.

(e) There is a serious lack of sufficient instruments (calibres and other apparatus).

(f) Bottlenecks are caused as a result of the poor quality of coke and crude iron.

(g) Serious bottlenecks would arise if:

i) the gas generating plant were unable to supply producer gas to the foundry and to the LORINC HENGERMU (Rolling Mill);

ii) the central boiler plant were out of action causing stoppage of the forge;

iii) the turning shop were put out of action;

iv) the electricity supply were interrupted (this would result in the steel foundry and the turning machine tools ceasing to function).

13. SECURITY

There is no armed factory guard. Access to the Works, both by night and by day is by the main entrance at Hofherr Albert-ut only, and all entry is controlled here. At night there are watchmen patrolling the Works.

14. ORGANISATION

(a) Plant organisation is virtually the same as at the CSEPEL Motor Works.

(b) The Works is under the immediate jurisdiction of the Automobile Industry Trust. It has no subsidiaries.

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(c) The Works Director is Jozsef DOROZSMAI, formerly a joiner. Prior to his nomination to this job he was Deputy Director at the GANZ Wagon Works. Prior to that post he was the Leader of Quality Control in the foundry of the GANZ Wagon Works.

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The Chief Engineer is Gyula KORPONAI, a brilliant expert. Formerly he was the Leader of the section of the Ministry in charge of the RAKOSI MATYAS Engineering Works Trust. During the war he 50X1-HUM took a prominent part in organising the manufacture of aircraft engines at the former MANFRED WEISS Works.

The Leader of the Iron and Steel Foundry is Engineer Andras TOTH, known in the whole country as a foundry expert. He has 50X1-HUM published several technical books. Formerly he was employed for several years in the foundry of MAVAG in BUDAPEST.

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The Leader of the Quality Control Section is one ZSOLCAI, an expert of medium standing.

15. LAYOUT

Legends to attached plans follow:

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A. Internal disposition of buildings, plant, machinery, etc. 50X1-HUM

1) LAJOSMISE Station building.
2) Railway line BUDAPEST - LAJOSMISE - KECSKEMET.
3) Railway weighing hut.
4) Goods yard.
5) Entrance to goods yard.
6) Gate of level crossing.
7) Tram line to BUDAPEST.
8) Tram line stop.
9) Signal-box.
10) Signalman's house.
11) Railway line to BUDAPEST.
12) Lane to "KISTEXT" Factory (pedestrians only).
13) "KISTEXT" Sports Ground.
14) Streets.
15) Living houses.
16) Cable and mast depot belonging to the Electricity Works.
17) Apprentice hostel.
18) Ulloi-ut.
19) Vas Gereben-utca.
20) Gyar-utca.
21) Hofherr Albert-utca.
22) Connecting tram line between the terminal stop of the No. 43 line and the shed.
23) Chemist shop.
24) Motor bus stop.
25) Tram stop.
26) Electric tram line to PESTSZENTLORINC.
27) Motor bus stop in direction of BUDAPEST.
28) Main entrance to VOROS CSILAG TRAKTOR GYAR (Red Star Tractor Works).
29) Porter's lodge.
30) Building of Director's office.

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31) ...

31) Secretariat.

32) Director's room.

33) Chief Engineer's room.

34) Food shop.

35) Dispensary.

36) Warehouse for materials.

37) Offices.

38) Forging shop.

39) Offices (one-storey building).

40) Power house and chimney-stack.

41) Steel foundry (built in 1949/50).

42) Sand and iron stores.

43) Works' railway branch line.

44) Producer gas generator.

45) Iron foundry.

46) Coke and iron store.

47) A wooden building, formerly used for selling spare parts (present use not known).

48) Pumping station.

49) Pond.

50) Tip lorry assembly shop (new building completed in 1952).

51) Turning shop (lathes, cutters, milling machines, drilling machines, etc.).

52) Precision turning shop (cogged-wheel grinders, circular grinders) and quality control instruments room.

53) Tractor assembly shop.

54) Turning shop for type SL 50/55 tractors.

55) Running-in station for tractors.

56) Air-raid shelter (built in 1953).

57) Store for finished tractors.

58) Store for incoming semi-finished materials and equipment, and offices.

/ 59) ...

59) Infant school (building and gardens).

60) Apprentice school.

B. Location of plant.

1) VOROS CSILLAG TRAKTORGYAR (Red Star Tractor Works).

2) LAJOSMISE Railway Station.

3) LORINCI HENGERMU (LORINC Rolling Mills).

4) School.

5) Carding-machine Ribbon Factory.

6) HONVED SPORTPALYA (Army Sports Ground).

7) "KISTEXT" Sports Ground.

8) Cable and electric masts deposit.

9) Apprentice school.

10) Shed of electric tram cars (KISPEST tram car shed).

11) Part of above shed which has been destroyed by fire.

12) "KISPEXT" power-station.

13) "KISTEXT" KISPESTI TEXTILGYAR (Textile Works).

14) Railway line.

15) Tramway line.

16) Infants' school.

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/ Supplementary Questions ...

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